

CASE REPORT

Metastatic Gastric Adenocarcinoma Presenting as a Solitary Plaque on the Palm

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Cutaneous metastases from gastric adenocarcinoma are extremely rare. When present, metastasis typically signifies disseminated disease with a poor prognosis. We report a case of an 80-year-old male with gastric cancer who presented with a single, erythematous plaque on the left palm, a very rare site for skin metastasis. Results of a skin biopsy demonstrated that the cutaneous metastasis originated from the stomach. This report emphasized the need for appropriate investigation into newly appearing, unusual, or persistent skin lesions. (**Ann Dermatol 23(S2) S205 ~ S207, 2011**)

-Keywords-

Cutaneous metastasis, Gastric cancer, Palm

INTRODUCTION

The incidence of cutaneous metastasis of malignant tumors has been estimated to be between 0.7% and 10.8%¹. These lesions generally occur in the late stages of malignant disease, and do not commonly present at the time of diagnosis². Breast and lung tumors have been the most frequent internal malignancies to spread to the skin³. Skin metastases from gastric adenocarcinoma have been extremely rare², with multiple subcutaneous nodules on

the trunk being the most common pattern of such metastases⁴. We report a case of a patient with gastric adenocarcinoma who presented with a solitary, erythematous skin plaque on the palm, a very rare site for skin metastasis. A skin biopsy revealed metastatic deposits.

CASE REPORT

An 80-year-old male patient underwent a subtotal gastrectomy for moderately differentiated gastric adenocarcinoma staged T2N1M0. The postoperative course was unremarkable. Chemotherapy was administered, and the patient was discharged uneventfully three months ago. The patient was hospitalized again with the chief complaint of a skin lesion, which he said had developed one week after discharge. A physical examination showed that he was cachectic and jaundiced, and had an erythematous, firm, well-circumscribed ulcerative plaque on the palmar aspect of his left hand that was sore (Fig. 1A). The lesion was 3 cm by 1.5 cm, and appeared to be two ulcerative plaques that had coalesced into a single plaque (Fig. 1B). Laboratory tests revealed pancytopenia in addition to elevated lactic acid dehydrogenase of 211 IU/L (normal range, 110 ~ 200 IU/L) and total/direct bilirubin of 2.4/0.9 $\mu\text{mol/L}$ (normal range, 0.3/0.0 ~ 1.3/0.4 $\mu\text{mol/L}$). Tumor marker studies showed an increased carcinoembryonic antigen level of 11.17 $\mu\text{g/L}$ (normal range, 0 ~ 3.4 $\mu\text{g/L}$) and a CA 19-9 level of 890.3 U/ml (normal range, 0 ~ 27 U/ml). Abdominal computed tomography showed two small hepatic nodules in the left lobe, mild dilation of the common duct, and low-density para-aortic adenopathies at the level of the renal hila.

Skin biopsy revealed infiltrating neoplastic cells in the dermis and subcutaneous tissue. The neoplastic cells formed somewhat irregular but relatively well-formed glands in a desmoplastic stroma that consisted of polygonal or round cells with irregular and conspicuous nuclei

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Fig. 1. (A) An erythematous, firm, well-circumscribed ulcerative plaque on the palmar aspect of the left hand. (B) The lesion was 3×1.5 cm sized and appeared to be two ulcerative plaques that had coalesced into a single plaque.

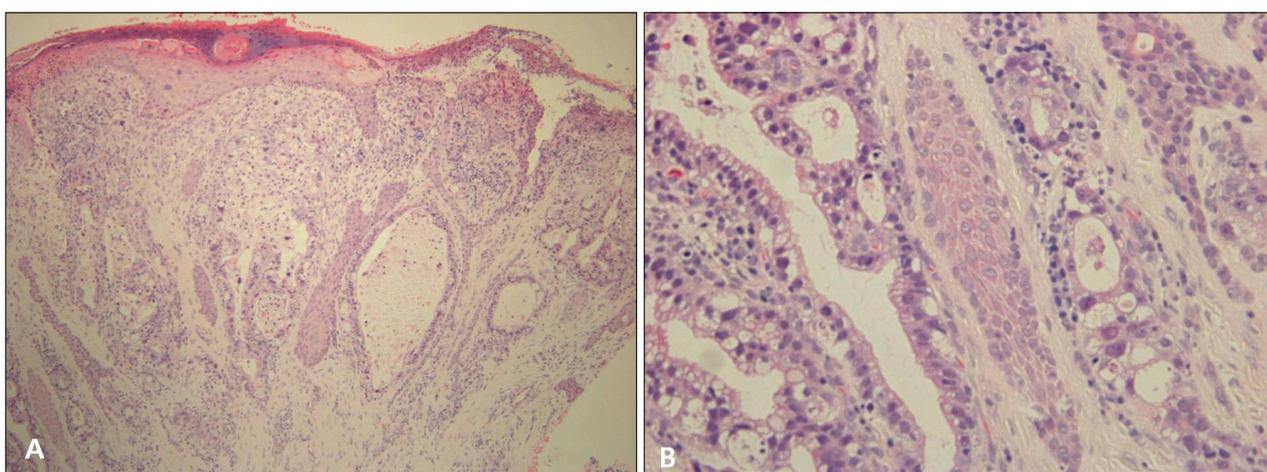


Fig. 2. (A) The skin biopsy showed irregular, but relatively well-formed glandular structure, and diffuse inflammatory cells infiltrating the in dermis (H&E, ×40). (B) Variable-sized atypical polygonal cells with hyperchromatic and pleomorphic nuclei in atypical glandular structure of the dermis (H&E, ×200).

and poor cytoplasm (Fig. 2A). Variably sized atypical polygonal cells with hyperchromatic and pleomorphic nuclei were seen in the dermis of the skin (Fig. 2B). Biopsy confirmed the diagnosis of cutaneous metastasis from the gastric cancer. The patient chose noncurative, conservative management for the metastatic skin lesion and was transferred to a hospice facility where he died after one month.

DISCUSSION

Cutaneous metastasis is a relatively uncommon manifestation of visceral malignancies. The overall incidence of cutaneous metastasis from visceral neoplasm is 5.3% and ranges from 0.7% to 9%^{1,4,5}. The highest incidence of cutaneous metastasis has been seen for breast cancer.

Cancers of the lung, colon/rectum, kidney, ovary, and bladder all have similar rates for cutaneous metastasis, ranging from 3.4% to 4%⁵. Gastric cancer causes only 6% of all skin metastases², and cutaneous metastasis occurs in 0.8% of all gastric cancers⁶. Thus, gastric cancer is a relatively rare cause of cutaneous metastasis from visceral cancer. Multiple subcutaneous nodules on the trunk seem to be the most common manifestation of such metastases⁷ and the typical location of gastric cancer cutaneous metastases has been demonstrated to be the umbilical area (Sister Joseph's nodule)⁸, which is near the primary cancer.

In the Korean-language scientific literature, Kim et al.⁹ investigated the frequency of cutaneous metastasis from gastric cancer in 14,053 patients who were diagnosed with gastric cancer, and found that 27 (0.19%) had

cutaneous metastasis. The reported location of the cutaneous metastases were abdomen (9 cases, 33%), face (6 cases, 22.2%), scalp (6 cases, 22.2%), chest (3 cases, 11.1%), extremities (3 cases, 11.1%), neck (2 cases, 7.4%), and pubic area (2 cases, 7.4%). In addition, in the same literature, cases of scalp^{10,11} and penis¹² metastasis from gastric cancer have been rare.

The case presented here is also remarkable because of the unusual location of the cutaneous metastasis. Cutaneous metastasis in the palmar area from visceral cancer has been reported in only four cases in the English-language literature¹³⁻¹⁶ since Camiel et al. originally reported skin metastasis on palm and sole from lung cancer. However, this had not yet been reported in the Korean-language literature. Presentation of a solitary ulcerative plaque, as in our case, may lead to multiple differential diagnoses such as granuloma pyogenicum, cutaneous lymphomas, or another skin cancer; a biopsy is needed for the accurate diagnosis of these patients.

Histologic appearance has been the most important feature in the diagnosis of cutaneous metastases, as they are similar to the primary tumor. The histologic features of cutaneous metastases from gastric cancer have been observed to be mainly those of an adenocarcinoma. In the current case, the features were identical to those of the gastric carcinoma, and tumor cells with cytoplasmic mucin and laterally displaced nuclei were recognized upon examination of the skin biopsy.

Because of advances in cancer therapy, the life expectancy of patients with cutaneous metastases has increased; however, cutaneous metastases remain a poor prognostic sign. Bordin and Weitzner¹⁷ reported that the duration of survival from the time of diagnosis of metastatic carcinoma in the skin averaged 11.4 weeks, with a range of 2 to 34 weeks. The treatment for most patients has been palliative, and although chemotherapy and radiotherapy have been often used in such patients, they have been ineffective in many cases¹⁸.

In conclusion, we presented a very uncommon case of gastric metastatic tumor with a single palm plaque observed instead of several subcutaneous trunk lesions. This case emphasizes that newly appearing skin lesions may be the first presentation of advanced visceral cancer and should be appropriately investigated. Despite the low frequency, persistent indurated erythema and all skin plaques of undetermined causes must be biopsied to rule out a diagnosis of cutaneous metastasis from visceral malignancy.

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